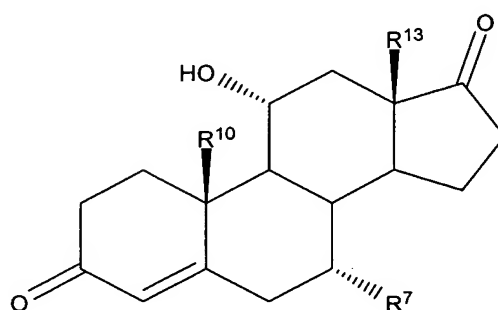


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims: Please amend the claims as follows:

We claim:

Claim 1. (Currently Amended) ~~Microbiological~~ A microbiological process for the production of a 7 α -substituted 11 α -hydroxy steroids ~~with general~~ of formula **4,B**[:]



4,B

~~in which~~ wherein

R⁷ ~~is the grouping P-Q, whereby~~ wherein

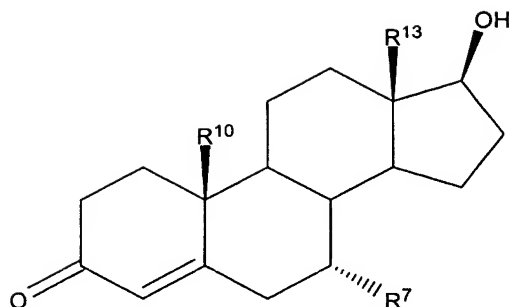
P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and ~~the grouping~~ wherein

P-Q is bonded via P to the steroid skeleton,

R¹⁰ ~~can be~~ is either in α - or β -position and ~~stands for~~ is H, CH₃ or CF₃, and

R¹³ is methyl or ethyl,

comprising hydroxylating and oxidizing of in which a 7 α -substituted steroid of with general formula 3,A,

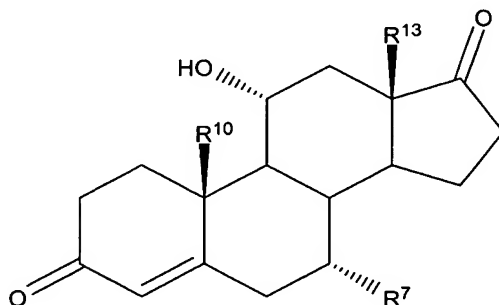


3,A

~~in which wherein~~ R^7 , R^{10} and R^{13} ~~have the same meanings are~~ as indicated above, is ~~hydroxylated and oxidized with use of a microorganism that which is selected from the group that comprises~~ *Aspergillus sp.*, *Beauveria sp.*, *Glomerella sp.*, *Gnomonia sp.*, *Haplosporella sp.* ~~and or~~ *Rhizopus sp.*

Claim 2. (Currently Amended) Process A process according to claim 1, characterized in that wherein the microorganism is ~~selected from the group that comprises~~ *Aspergillus awamori*, *Aspergillus fischeri*, *Aspergillus malignus*, *Aspergillus niger*, *Beauveria bassiana*, *Glomerella cingulata*, *Gnomonia cingulata*, *Haplosporella hesperedica* ~~and or~~ *Rhizopus stolonifer*.

Claim 3. (Currently Amended) Microbiological A microbiological process for the production of 7 α -substituted 11 α -hydroxy steroids ~~with general of~~ formula **4,B**[:]



4,B

in which wherein

R^7 is the grouping P-Q, whereby wherein

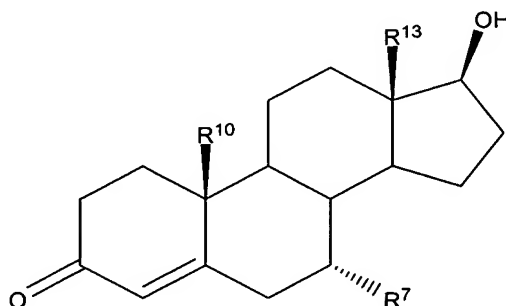
P represents is a C₁- to C₄-alkylene and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein P-Q is bonded via P to the steroid skeleton,

R^{10} can be is either in α - or β -position and stands for is H, CH₃ or CF₃, and

R^{13} is methyl or ethyl,

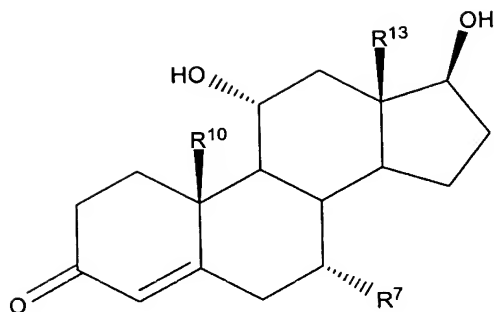
in which

comprising hydroxylating of a 7 α -substituted steroid with general of formula **3,A** in 11 α -position, [:]



3,A

in which wherein R^7 , R^{10} and R^{13} have the same meanings are as previously indicated, is hydroxylated in 11 α -position in a first microbiological process step with use of using a first microorganism that which is selected from the group that comprises *Aspergillus sp.*, *Beauveria sp.*, *Gibberella sp.*, *Glomerella sp.*, *Gnomonia sp.*, *Metarrhizium sp.*, *Nigrospora sp.*, *Rhizopus sp.* and or *Verticillium sp.*, with the formation of to form a 7 α -substituted 11 α -hydroxy steroid with general of formula **C**:



C

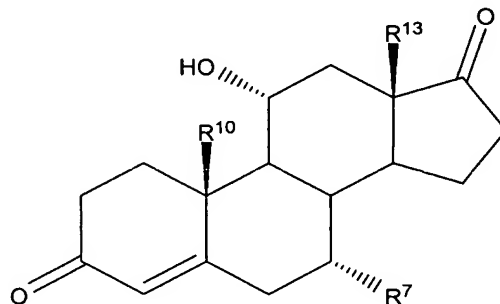
~~in which wherein~~ R^7 , R^{10} and R^{13} ~~have the same meanings~~ are as indicated above,
and
oxidizing the 7 α -substituted 11 α -hydroxy steroid with general product of formula C that is
~~produced is then oxidized with use of a second microorganism that~~ which is selected from
~~the group that comprises~~ *Bacillus* sp., *Mycobacterium* sp., *Nocardia* sp. and or
Pseudomonas sp., ~~with the formation of the 7 α -substituted steroid with general formula~~
4,B.

Claim 4. (Currently Amended) ~~Process~~ A process according to claim 3, wherein
the first microorganism is ~~selected from the group that comprises~~ *Aspergillus malignus*,
Aspergillus melleus, *Aspergillus niger*, *Aspergillus ochraceus*, *Beauveria bassiana*,
Gibberella fujikuroi, *Gibberella zeae*, *Glomerella cingulata*, *Glomerella fusaroides*,
Gnomonia cingulata, *Metarrhizium anisopliae*, *Nigrospora sphaerica*, *Rhizopus oryzae*,
Rhizopus stolonifer and or *Verticillium dahliae*.

Claim 5. (Currently Amended) ~~Process~~ A process according to claim 3, wherein
the second microorganism is ~~selected from the group that comprises~~ *Bacillus lactimorbus*,
Bacillus sphaericus, *Mycobacterium neoaurum*, *Mycobacterium smegmatis*, *Nocardia*
corallina, *Nocardia globerula*, *Nocardia minima*, *Nocardia restrictus*, *Nocardia*
rubropertincta, *Nocardia salmonicolor* and or *Pseudomonas testosteroni*.

Claim 6. (Currently Amended)

Microbiological A microbiological process for the production of a 7 α -substituted 11 α -hydroxy steroids with general of formula 4,B[\div]



4,B

in which wherein

R⁷ is the grouping P-Q, whereby wherein

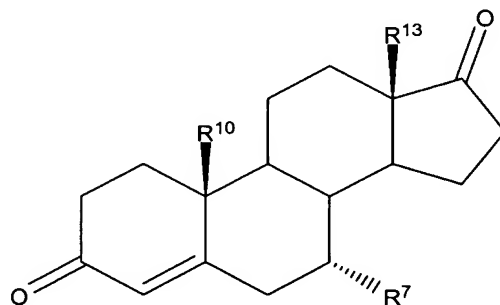
P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and the grouping wherein
P-Q is bonded via P to the steroid skeleton,

R¹⁰ can be is either in α - or β -position and stands for is H, CH₃ or CF₃,

and

R¹³ is methyl or ethyl,

comprising hydroxylating in which 7 α -substituted steroids with general of formula D:



D

in which wherein R^7 , R^{10} and R^{13} ~~have the same meanings are~~ as indicated above, are ~~hydroxylated with use of~~ using a microorganism that which is selected from the group that comprises *Aspergillus* sp., *Beauveria* sp., *Curvularia* sp., *Gibberella* sp., *Glomerella* sp., *Gnomonia* sp., *Haplosporella* sp., *Helicostylum* sp., *Nigrospora* sp., *Rhizopus* sp. and or *Syncephalastrum* sp.

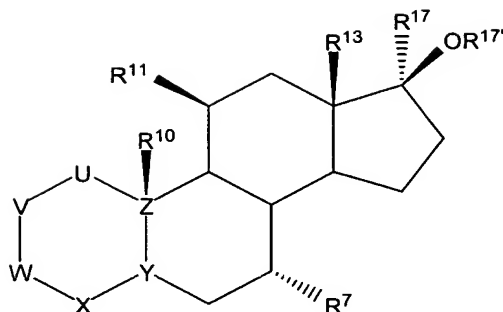
Claim 7. (Currently Amended) ~~Process~~ A process according to claim 6, wherein the microorganism is ~~selected from the group that comprises~~ *Aspergillus alliaceus*, *Aspergillus awamori*, *Aspergillus fischeri*, *Aspergillus malignus*, *Aspergillus melleus*, *Aspergillus nidulans*, *Aspergillus niger*, *Aspergillus ochraceus*, *Aspergillus variegator*, *Beauveria bassiana*, *Curvularia lunata*, *Gibberella zeae*, *Glomerella cingulata*, *Glomerella fusaroides*, *Gnomonia cingulata*, *Haplosporella hesperedica*, *Helicostylum piriformae*, *Nigrospora sphaerica*, *Rhizopus oryzae* and or *Syncephalastrum racemosum*.

Claim 8. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R^7 stands for CH_3 .

Claim 9. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R^{10} stands for H.

Claim 10. (Currently Amended) Microbiological A microbiological process according to claim 1, wherein R^{13} stands for CH_3 .

Claim 11. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids with general of formulas **8**, **10**, and or **12**:



8,10,12

in which wherein

U-V-W-X-Y-Z ~~stands for one of~~ is a ring structures $C^1-C^2-C^3-C^4=C^5-C^{10}$, $C^1-C^2-C^3-C^4-C^5=C^{10}$ or $C^1-C^2-C^3-C^4-C^5-C^{10}$, ~~whereby in this case,~~ wherein an oxo group ($=O$) is bonded to W ($=C^3$),

or a ring structure $C^1=C^2-C^3=C^4-C^5=C^6$, ~~whereby in this case~~ wherein a radical OR^3 is bonded to W ($=C^3$),

R^3 ~~stands for~~ is H, C_1 - to C_4 -alkyl, C_1 - to C_4 -alkanoyl or a cyclic C_3 - to C_7 -ether with the O-atom of the OR^3 -radical,

R^7 ~~is the grouping~~ P-Q, whereby wherein

P represents is a C_1 - to C_4 -alkylene, and Q represents is hydrogen, a C_1 - to C_4 -alkyl- or C_1 - to C_4 -fluoroalkyl, and ~~the grouping~~ wherein P-Q is bonded via P to the steroid skeleton,

R^{10} ~~can be~~ is either in α - or β -position and ~~stands for~~ is H, CH_3 or CF_3 , and is present only if X-Y-Z is not $C^4-C^5=C^{10}$,

R^{11} is a halogen,

R^{13} is methyl or ethyl,

R^{17} ~~stands for~~ is H, C_1 - to C_{18} -alkyl, alicyclic C_1 - to C_{18} -alkyl, C_1 - to C_{18} -alkenyl, alicyclic C_1 - to C_{18} -alkenyl, C_1 - to C_{18} -alkinyl, C_1 - to C_{18} -alkylaryl, C_1 - to C_8 -alkylenitrile or ~~for the grouping~~ P-Q, whereby the grouping wherein P-Q has the above-mentioned meaning,

$R^{17'}$ ~~stands for~~ is H, C_1 - to C_{18} -alkyl, alicyclic C_1 - to C_{18} -alkyl, C_1 - to C_{18} -alkenyl,

alicyclic C₁- to C₁₈-alkenyl, C₁- to C₁₈-alkinyl or C₁- to C₁₈-alkylaryl, ~~whereby~~
wherein R¹⁷ also can be is optionally bonded via a keto group to the 17β-oxy
group, ~~and whereby R¹⁷ also in addition can be or optionally~~ substituted with
one or more groups NR¹⁸R¹⁹ or one or more groups SO_xR²⁰, ~~whereby~~
wherein x = 0, 1 or 2,

and R¹⁸, R¹⁹ and R²⁰ in each case, independently of one another, can have
the same meaning as R¹⁷,

~~as well as their pharmaceutically compatible addition salts, esters and amides a~~
pharmaceutically compatible salt thereof or an ester or amide thereof.

Claim 12. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein U-V-W-X-Y-Z ~~stands for~~ is a ring structure
C¹-C²-C³-C⁴=C⁵-C¹⁰ or C¹-C²-C³-C⁴-C⁵=C¹⁰ or C¹=C²-C³=C⁴-C⁵=C¹⁰.

Claim 13. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein R¹ ~~stands for~~ is H.

Claim 14. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein R⁷ ~~stands for~~ is CH₃.

Claim 15. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein R¹¹ ~~stands for~~ is fluorine.

Claim 16. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein R¹³ ~~stands for~~ is CH₃.

Claim 17. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-
halogen steroids according to claim 11, wherein R¹⁷ ~~stands for~~ is H, CH₃, C₁- to C₁₈-alkinyl,
CH₂CN or CF₃.

Claim 18. (Withdrawn, Currently Amended) A 7α,17α-Substituted substituted 11β-

halogen steroids according to claim 11, wherein R^{17} is ethinyl.

Claim 19. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, wherein R^{17} ~~stands for~~ is H.

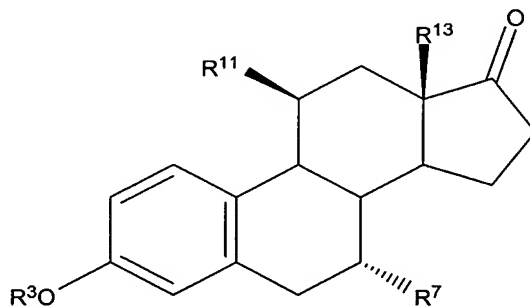
Claim 20. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -halogen steroids according to claim 11, ~~namely~~ which is

17 α -Ethinyl-11 β -fluoro-17 β -hydroxy-7 α -methylestr-4-en-3-one,

17 α -Ethinyl-11 β -fluoro-17 β -hydroxy-7 α -methylestr-5(10)-en-3-one or

17 α -Ethinyl-11 β -fluoro-7 α -methylestra-1,3,5(10)-triene-3,17 β -diol.

Claim 21. (Withdrawn, Currently Amended) A 7 α ,17 α -Substituted substituted 11 β -haloestra-1,3,5(10)-trienes with general of formula 6:



6

~~in which~~ wherein

R^3 ~~stands for~~ is H, C₁- to C₄-alkyl, C₁- to C₄-alkanoyl or a cyclic C₃- to C₇-ether with the O-atom of the OR^3 -radical,

R^7 is the grouping P-Q, whereby wherein

P represents is a C₁- to C₄-alkylene, and Q represents is hydrogen, a C₁- to C₄-alkyl- or C₁- to C₄-fluoroalkyl, and ~~the grouping~~ wherein P-Q is bonded via P to the steroid skeleton,

R^{11} is a halogen;

R^{13} is methyl or ethyl,
~~as well as their pharmaceutically compatible addition salts, esters and amides a~~
pharmaceutically compatible salt thereof or an ester or amide thereof.

Claim 22. (Withdrawn, Currently Amended) ~~A 7 α ,17 α -Substituted~~ substituted haloestra-1,3,5(10)-trienes according to claim 21, ~~namely~~ which is
11 β -Fluoro-3-hydroxy-7 α -methylestra-1,3,5(10)-trien-17-one.

Claim 23. (Withdrawn, Currently Amended) ~~Process~~ A process for the production of a 7 α ,17 α -substituted 11 β -halogen steroids ~~with general of~~ formula 10 according to according to claim 11, in which U-V-W-X-Y-Z ~~stands for~~ is the ring structure C¹-C²-C³-C⁴=C⁵-C¹⁰, ~~with the following process comprising the steps of:~~

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid ~~with general of~~ formula 4,B in 11-position with a halodehydroxylating reagent;
- Reaction of the 7 α -substituted 11 β -halogen steroid that is produced ~~in this case~~ with an alkylating agent in a selective manner on the C¹⁷ atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid ~~with general of~~ formula 10.

Claim 24. (Withdrawn, Currently Amended) ~~Process~~ A process for the production a 7 α ,17 α -substituted 11 β -halogen steroids ~~with general of~~ formula 12 according to according to claim 11, in which U-V-W-X-Y-Z ~~stands for~~ is the ring structure C¹-C²-C³-C⁴-C⁵=C¹⁰, ~~with the following process comprising the steps of:~~

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid ~~with general of~~ formula 4,B in 11-position with a halodehydroxylating reagent,
- Reaction of the 7 α -substituted 11 β -halogen steroid that is produced ~~in this case~~ with an alkylating agent in a selective manner on the C¹⁷ atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid ~~with general of~~ formula 10,
- Isomerization of the 7 α ,17 α -substituted 11 β -halogen steroid ~~with general of~~ formula 10 to form the corresponding isomer ~~with general of~~ formula 12, in which U-V-W-X-Y-Z ~~stands for~~ is the ring structure C¹-C²-C³-C⁴-C⁵=C¹⁰.

Claim 25. (Withdrawn, Currently Amended) ~~Process~~ A process for the production a 7 α ,17 α -substituted 11 β -halogen steroids ~~with general of~~ formula 8 according to according to claim 11, in which U-V-W-X-Y-Z ~~stands for is~~ the ring structure $C^1=C^2-C^3=C^4-C^5=C^6$ ~~with the following process comprising the steps of:~~

- Nucleophilic substitution in a 7 α -substituted 11 α -hydroxy steroid ~~with general of~~ formula 4,B in 11-position with a halodehydroxylating reagent,
- Oxidizing of the 7 α -substituted 11 β -halogen steroid that is produced in this case to form 7 α -substituted estra-1,3,5(10)-triene ~~with general of~~ formula 6 according to ~~one of claims claim~~ 17 and 18;
- Reaction of the 7 α -substituted estra-1,3,5(10)-triene with general formula 6 with an alkylating agent in a selective manner on the C¹⁷ atom of the ring skeleton to form the 7 α ,17 α -substituted 11 β -halogen steroid with general formula 8.

Claim 26. (Cancelled)

Claim 27. (Withdrawn, Currently Amended) ~~Pharmaceutical preparations that contain~~ A pharmaceutical preparation containing at least one 7 α ,17 α -substituted 11 β -halogen steroid with general formulas 8, 10, and 12 according to claim 11 as well as at least one pharmaceutically compatible vehicle.